

A dark blue, microscopic image of virus particles, likely coronaviruses, with prominent surface spikes. The particles are spherical and covered in small, dark, triangular protrusions. They are set against a lighter blue, hazy background.

National Pandemic GIS & Informatics Task Force

Briefing for the National Geospatial Advisory Council

October 12, 2021

Agenda

01

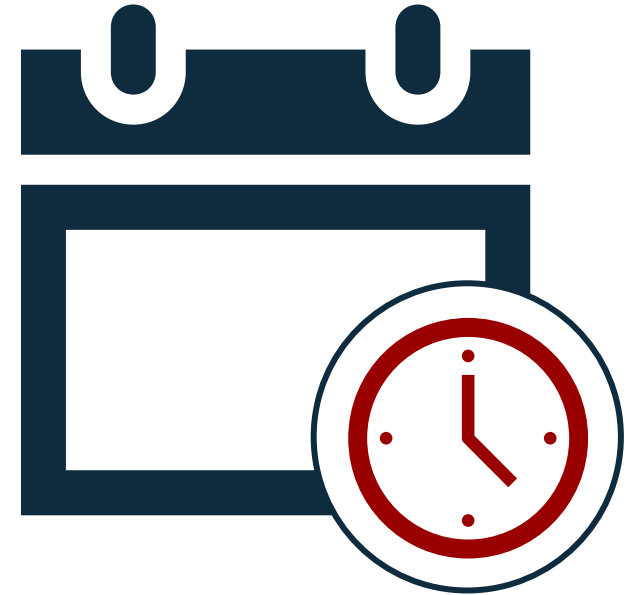
Overview of the Pandemic GIS & Informatics Task Force

02

Task Force Roadmap and Priority Requirements

03

Discussion on Opportunities for Collaboration with NGAC and Federal Agencies



Overview of the Pandemic GIS & Informatics Task Force

Overview

- Formed in May 2020 with the goal *to increase pandemic preparedness and unity of effort by enabling effective information sharing and use of location-enabled technology for informing critical decision making.*

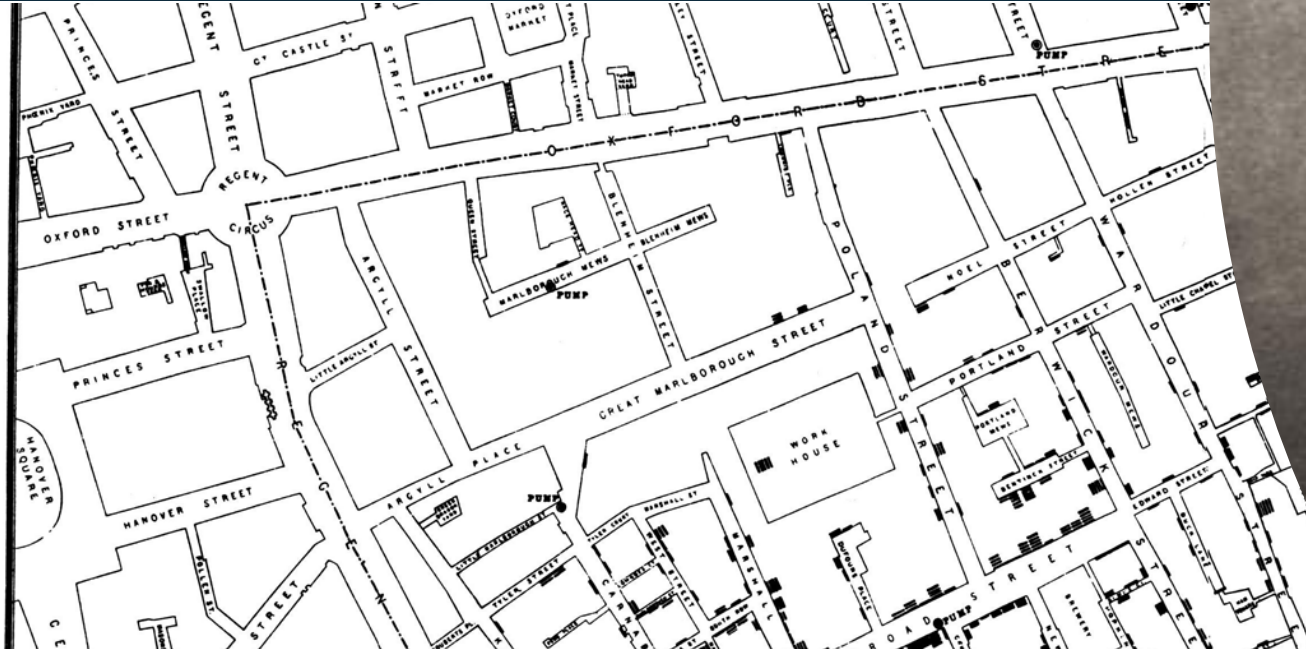
Founding Organizations



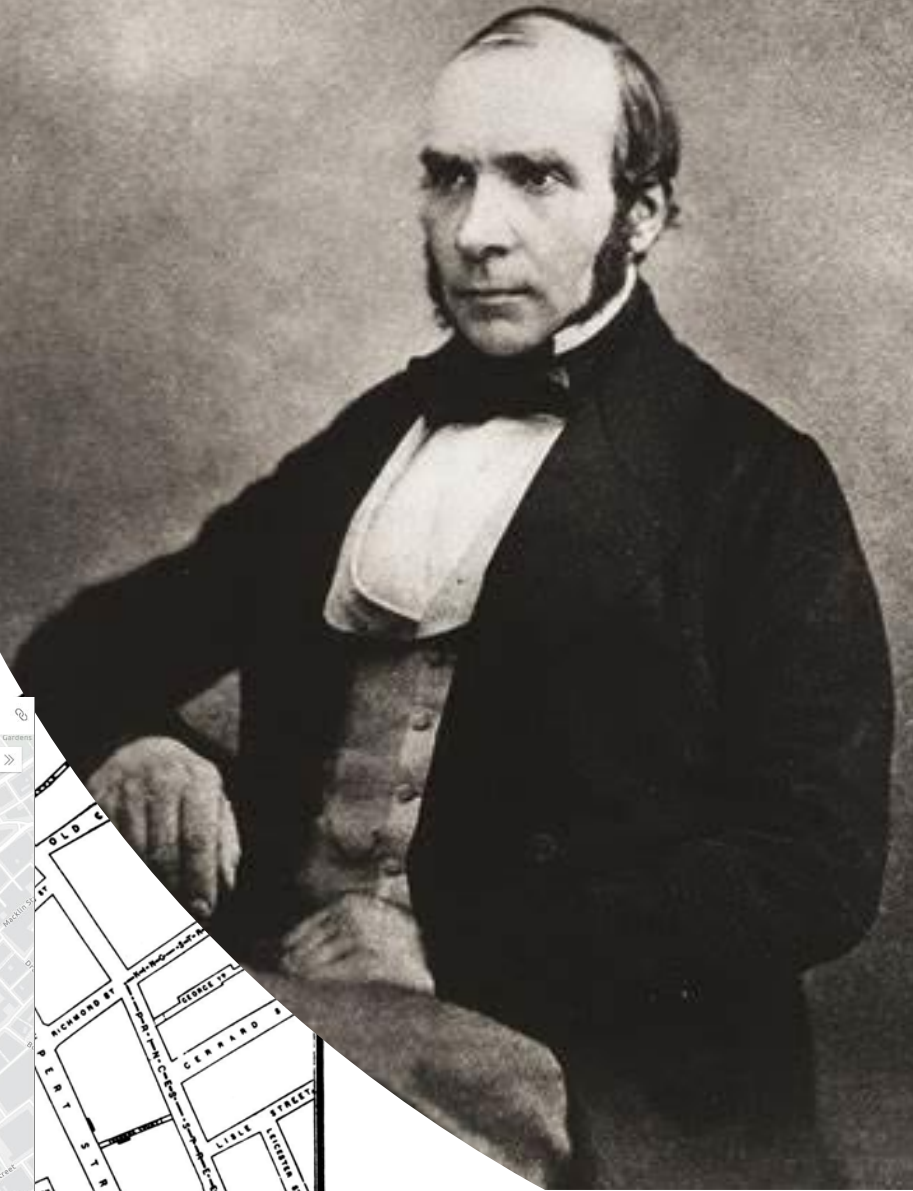
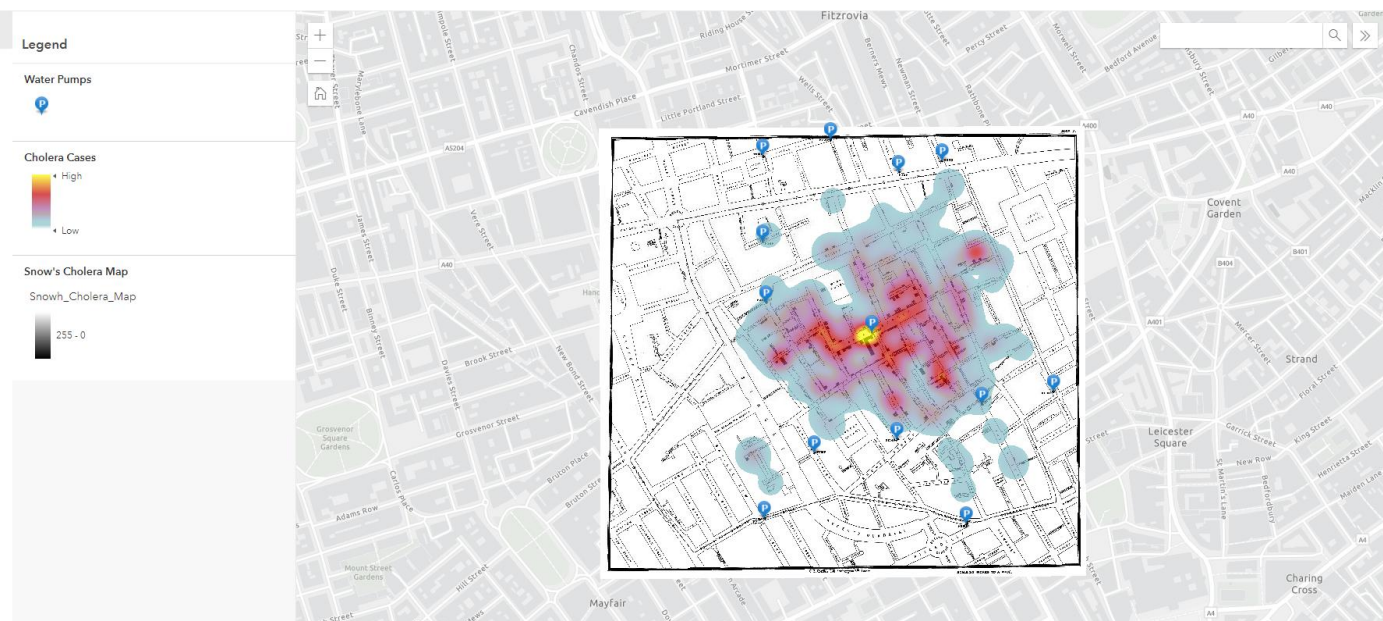
Coordinating Organizations



Dr John Snow



1854 London Cholera Outbreak - Learn



<https://arcg.is/1y9TGH0> and
<https://learn.arcgis.com/en/projects/map-a-historic-cholera-outbreak/>



Why?

Propagation and impact of COVID-19 can be best understood in the context of *space* and *time*.

What?

Data made available in different forms to support different groups responding.

Epidemiologists
& Statisticians



Policy Makers

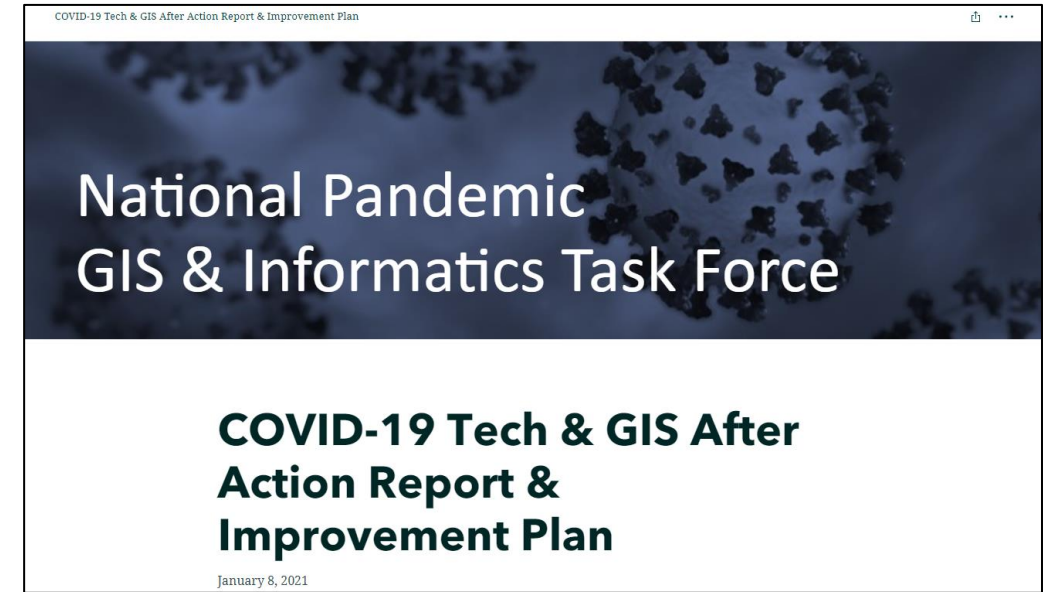
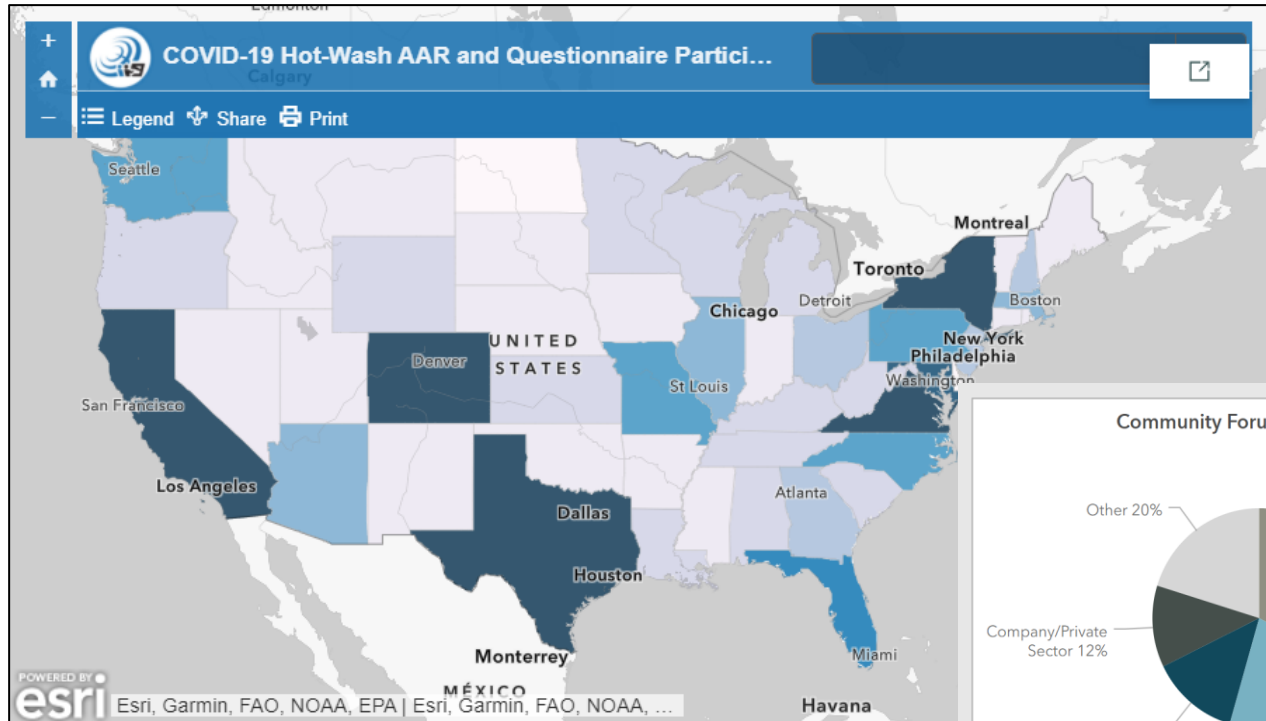
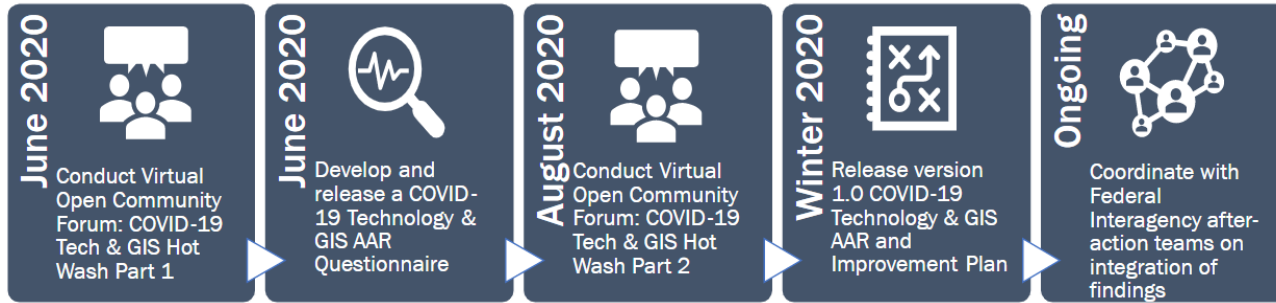


Emergency
Managers

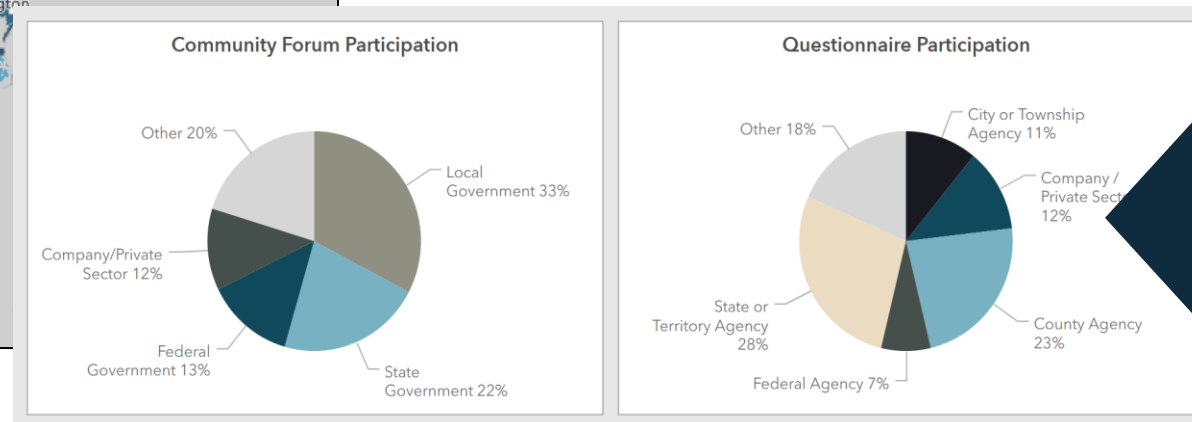


The Public
*Ultimate
decision
makers*

COVID-19 Tech & GIS After-Action Review



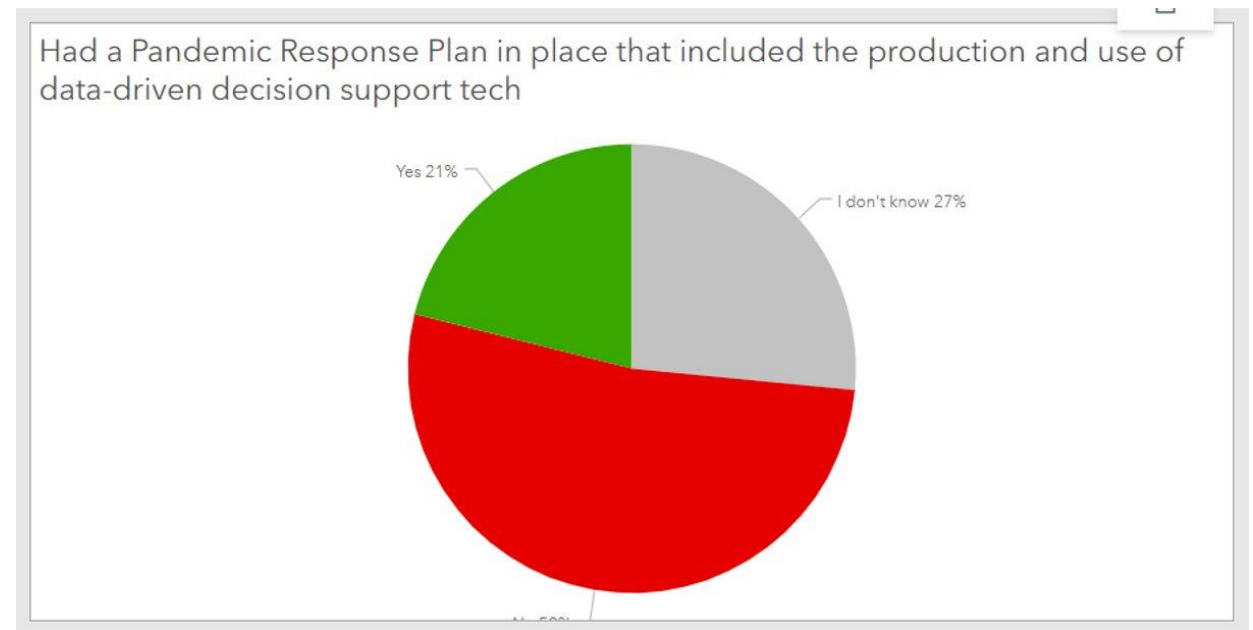
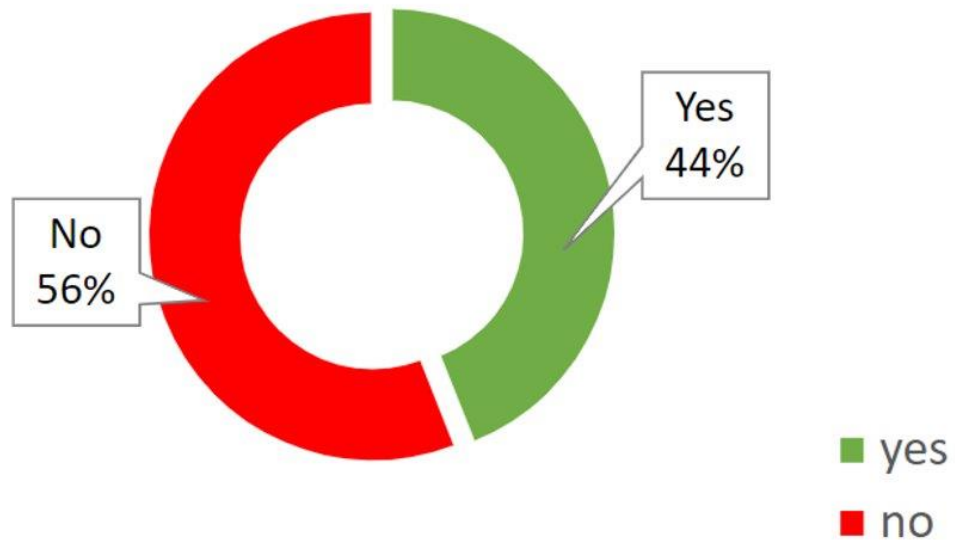
<https://arcg.is/14Sau90>



Engaged nearly 1,000 stakeholders nationwide

Start with Preparedness Efforts – Pandemic Planning

DID YOUR AGENCY SUCCESSFULLY USE
IT'S PANDEMIC RESPONSE PLAN TO
GUIDE COVID-19 RESPONSE



Priority Technology and Data Challenges



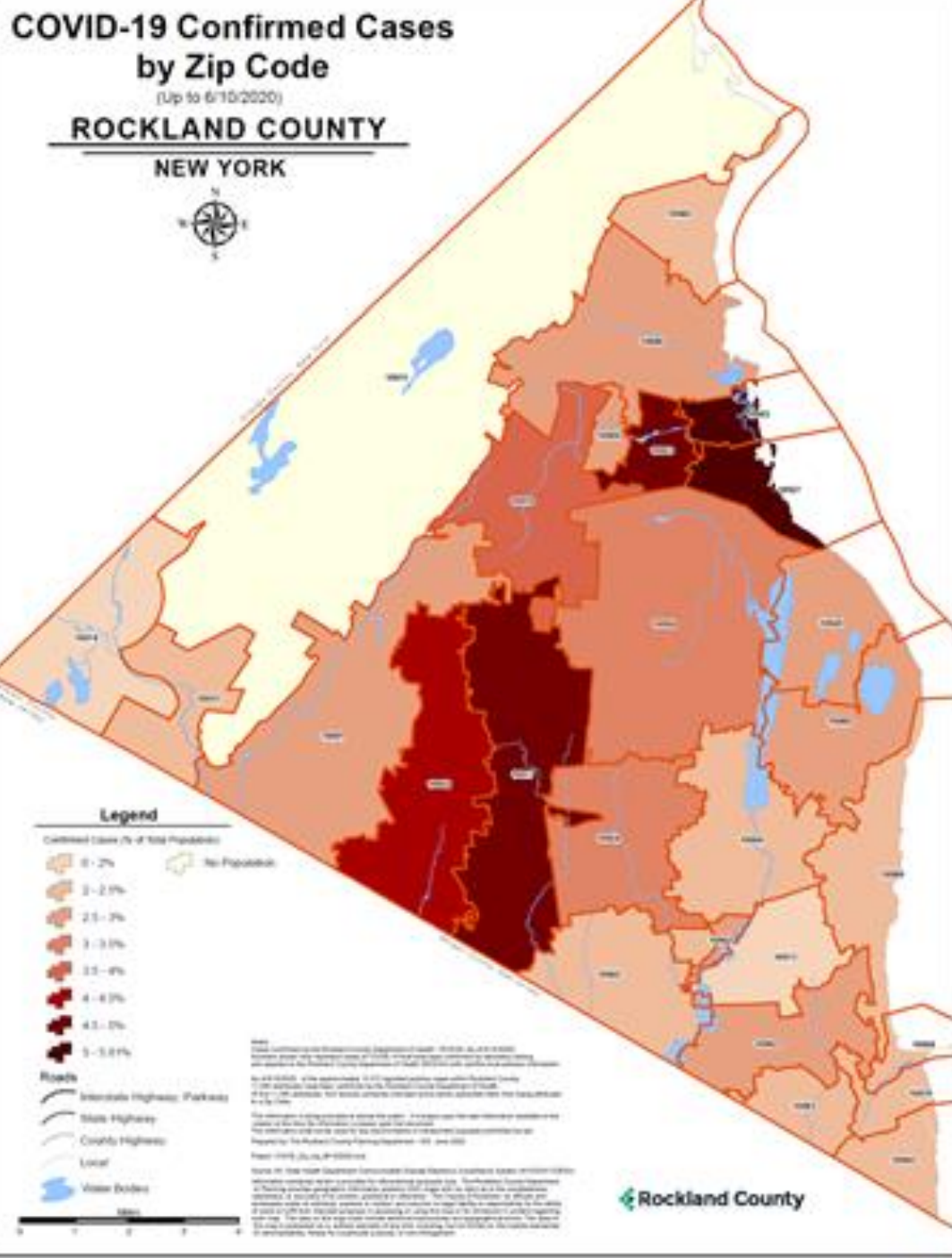
Challenge Area	% of Entities Reporting This as a Challenge
Lack of Access to Technology or Licenses	28%
Need to Build Relationships with Technologists/GIS/Data Science	46%
Lack of Trained Staff	46%
Lack of Prior Knowledge About Available Technology Capabilities	54%
Lack of Understanding Models	55%
Restricted Data Access and Sharing	57%
Duplicative Manual Reporting Data Entry	60%
Lack of Reliable Data	70%

COVID-19 Confirmed Cases by Zip Code

(Up to 6/10/2020)

ROCKLAND COUNTY

NEW YORK

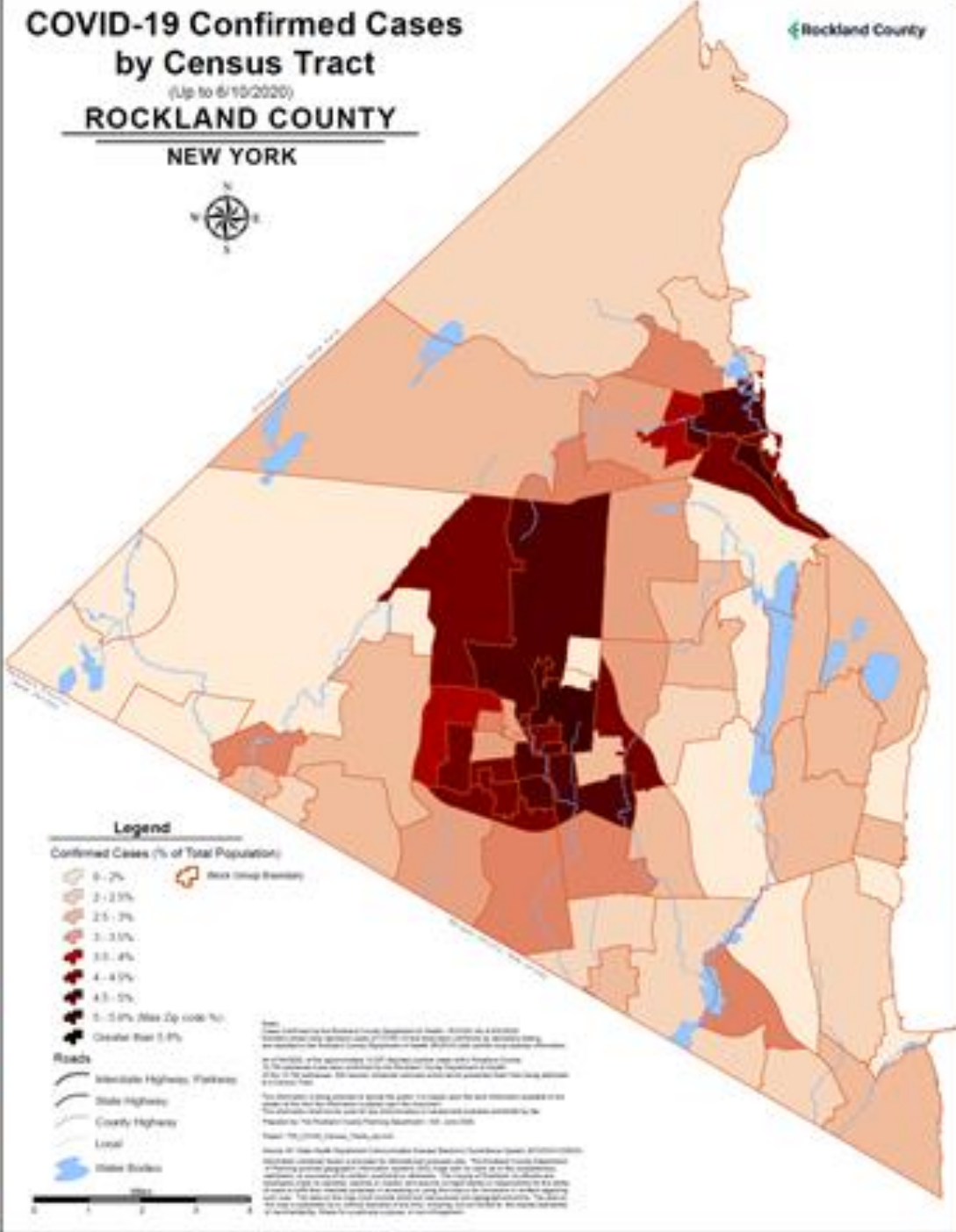


COVID-19 Confirmed Cases by Census Tract

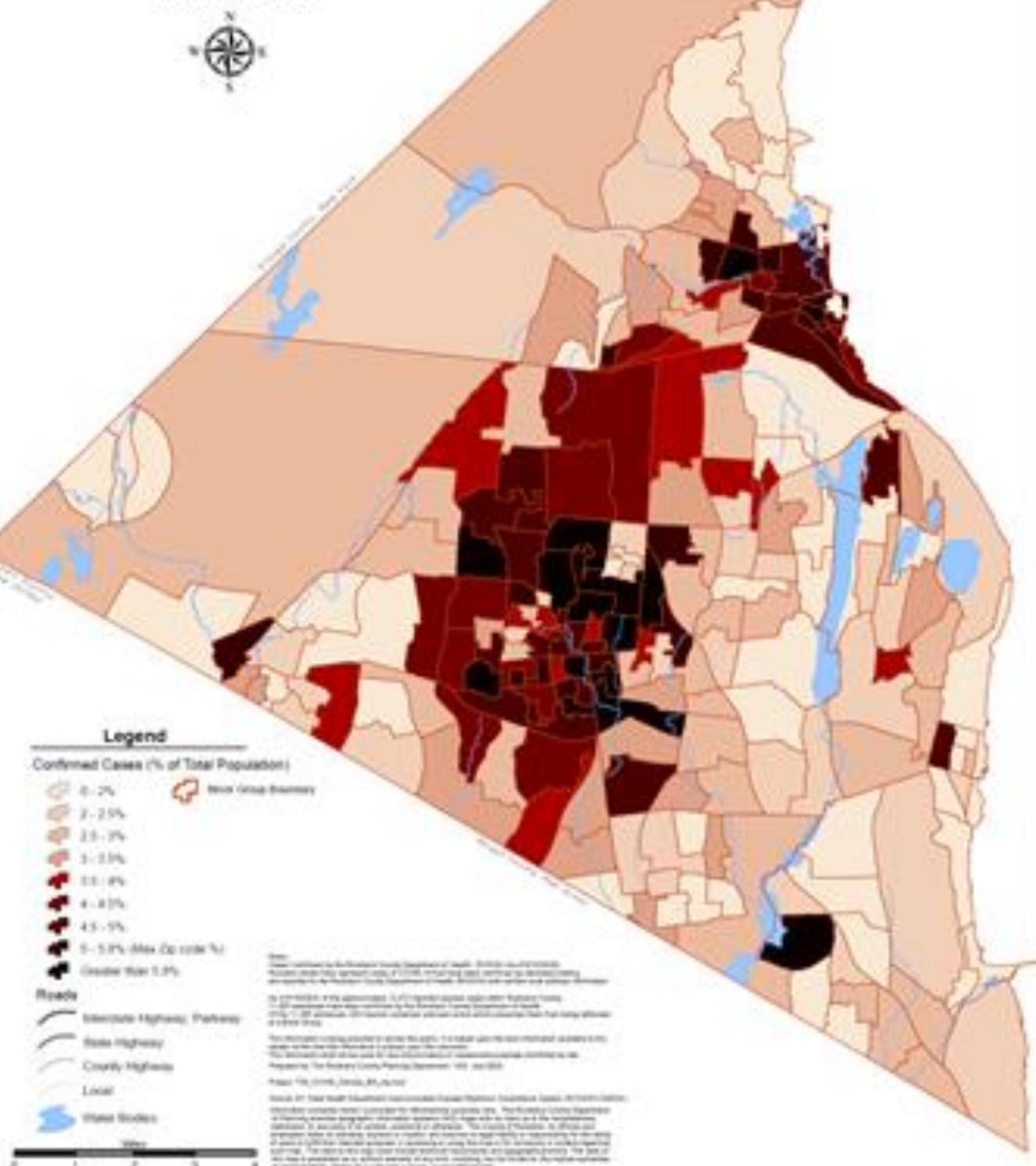
(Up to 6/10/2020)

ROCKLAND COUNTY

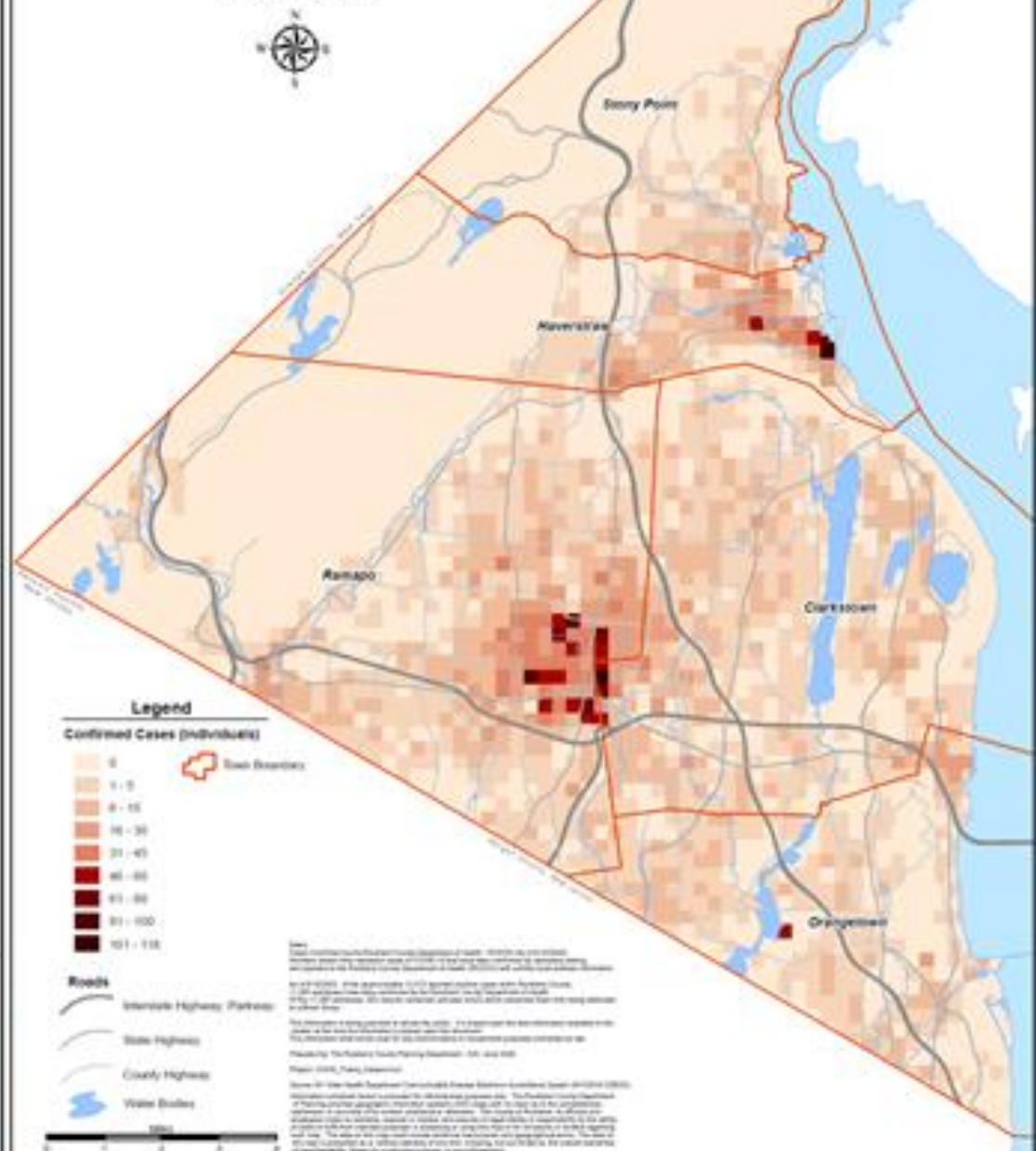
NEW YORK



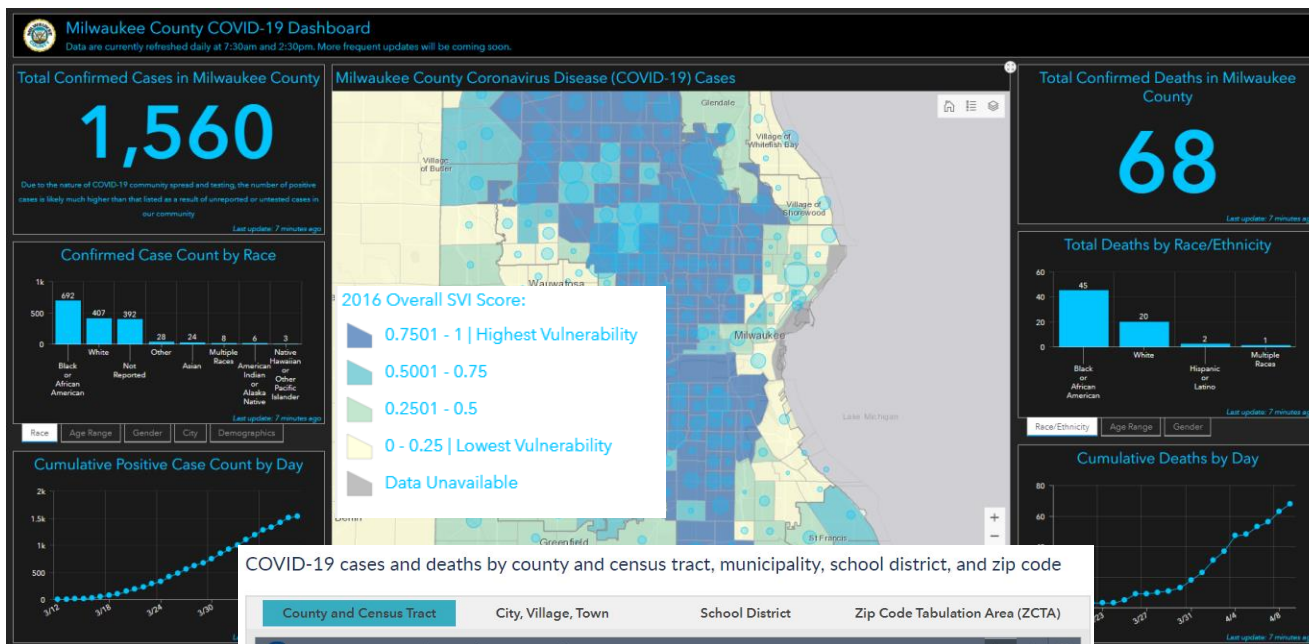
COVID-19 Confirmed Cases
by Census Block Group
(As of 6/10/2020)
ROCKLAND COUNTY
NEW YORK



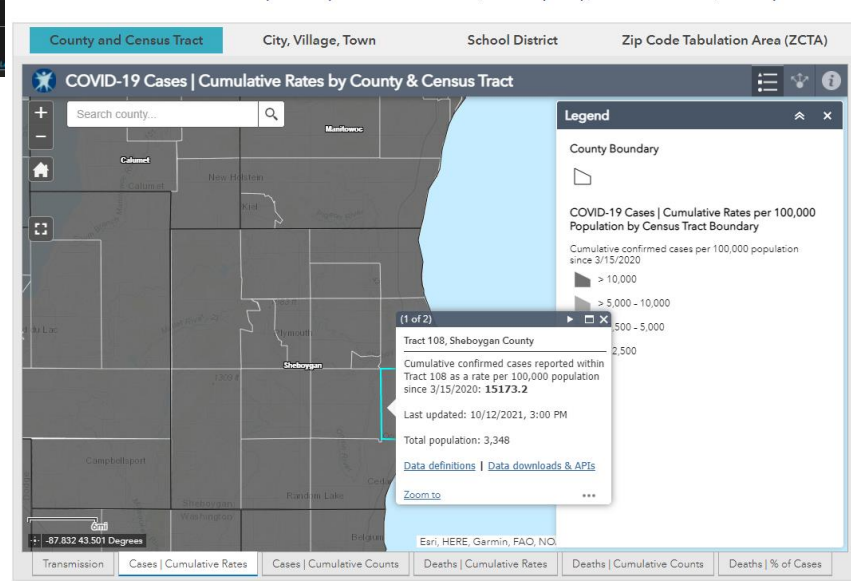
COVID-19 Cumulative Cases
(Up to 6/10/2020)
ROCKLAND COUNTY
NEW YORK



Wisconsin Case Study



COVID-19 cases and deaths by county and census tract, municipality, school district, and zip code



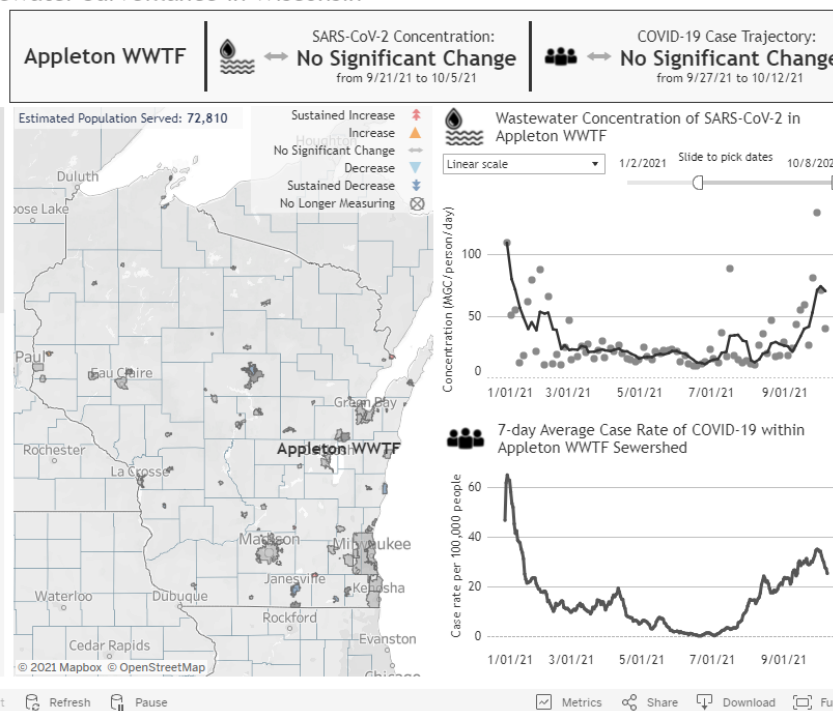
<https://www.dhs.wisconsin.gov/covid-19/data.htm#maps>

<https://www.dhs.wisconsin.gov/covid-19/wastewater.htm#wastewater>

COVID-19 Wastewater Surveillance in Wisconsin

Date Updated: 10/12/2021

Click on the list or map to select a sewershed. Click again to deselect.





This map displays a geographical area with various land parcels. A large central region is shaded in light blue and contains a network of brown lines representing a public sewer system. To the right of this blue area, a blue dot marks the location of a wastewater treatment plant. Surrounding the blue-shaded area and the plant are numerous yellow-shaded parcels, which are designated for private septic systems. The map also shows some green areas, possibly parks or undeveloped land, and a road network.

**Wastewater
Treatment Plant**

**Parcels with
Public Sewer**

**Parcels with
Private Septic**

Roadmap and Priority Requirements

Task Force 2-year Roadmap

Current Task Force Deliverables

- Playbook is completed, disseminated, and in widespread use.
- Funding is secured to enable completion of Phase 2 of the COVID-19 AAR (post-vaccine availability and distribution).

Task Force Capacity & Expertise

- Task Force leadership is engaged, diverse, and robust.
- ASTHO and NACCHO formally and actively engaged.
- Increased representation by emergency and incident management.

Data and Modeling Standards and Best Practices

- Phase 2 of the AAR is complete, distributed, and informing decision making.
- Guidance is developed by the TF on meaningful anonymous data.

Policy Advocacy for Accurate, Accessible Data and Privacy

- TF has published and presented policy position paper(s) to encourage integration and standardization of data for pandemic preparedness and response.

Education and Outreach

- Outreach and communications plan is developed and being implemented.
- A web portal/resource hub is in use to capture and share lessons learned and best practices.

Priority Requirements

01

National Pandemic GIS & Technology Playbook

- Build out the playbook
- Integrate with national and international pandemic playbooks
- Educate and promulgate adoption and use across the FSLTT nationwide

02

Meaningful Anonymous Data – *Develop and Promote Guidance for Safe Data Aggregation*

- Enable necessary data granularity to drive accurate decision making
- Protecting privacy and comply with HIPPA

03

National Data Needs for Pandemic Preparedness

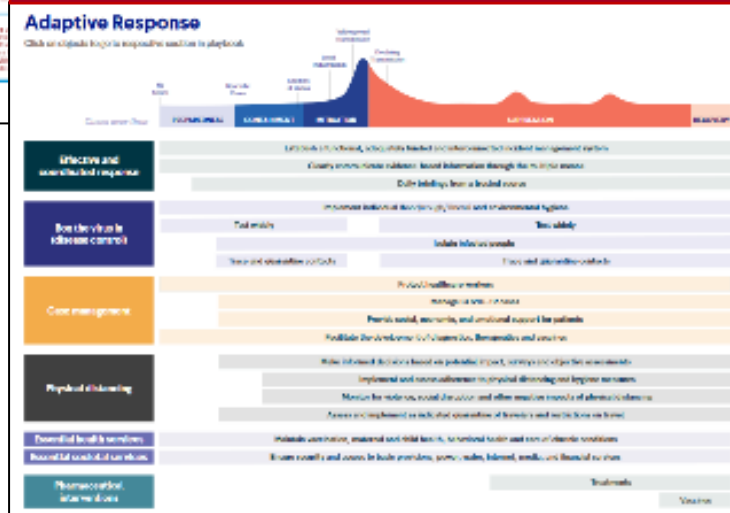
- National Address Database
- Parcel Data

National Playbook Overview

Develop and promote use of a standardized National Playbook for Integrating Technology & GIS in Pandemic Response & Recovery.

PHASE	DESCRIPTION	MAIN ACTIONS
P1: No evidence of human-to-human transmission	No evidence of human-to-human transmission	Surveillance and early detection
P2: Limited human-to-human transmission	Limited human-to-human transmission	Surveillance and early detection
P3: Widespread human-to-human transmission	Widespread human-to-human transmission	Surveillance and early detection
P4: Global pandemic	Global pandemic	Surveillance and early detection
P5: Endemic	Endemic	Surveillance and early detection

GIS & Tech Playbook framed around emerging pandemic response playbooks



Pandemic Activity

Key Questions & Decisions

Information Needs

GIS/Data/Tech Activities

Tools, Resources, and Best Practices

01

Help Shape the future of the Task Force

- Identify proper placement
- Identify partnership and funding opportunities
- Expand and amplify the playbook message
- Do we spatially enable someone else's work? How do we fit?

02

Assist with data governance and availability

- Strategy for secure data aggregation
- HIPPA → Anonymous meaningful data

03

Add pandemic to existing use cases for NSDI

- National Address Database
- Parcel Data

(Common requirements also needed for most disasters)

Which of the 3 priority requirements best align with your agency or organization?

How can we partner with you to move one of these priority needs and requirements forward?



Thank You!

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- Rebecca Harned – HarnedR@4arrowsinc.com
- More Information about the Pandemic GIS Task Force:
<https://www.napsgfoundation.org/pandemic-gis-task-force/>

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